# WATER QUALITY CODE

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for the

## PICURIS PUEBLO



Adopted May 11, 1995

Revision May 2000

Revised \_\_\_\_\_\_2007

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#### SECTION I. AUTHORITY, PURPOSE AND APPLICABILITY

#### **AUTHORITY**

Pursuant to the sovereign authority of the Tribal Council of the Pueblo of Picuris, a federally recognized Tribe of Indians with the inherent authority to make laws to protect the political integrity, economic security, health, safety, welfare, and the environment of the Pueblo, its people, and its residents, and in recognition of Section 518 of the Clean Water Act, 33 U.S.C. § 1377, the Pueblo of Picuris hereby enacts this Water Quality Code (hereinafter "Code").

#### **PURPOSE**

The purpose of this Code is to enact water quality standards consistent with Section 101(a)(2) of the Clean Water Act. 33 U.S.C. § 1251(a)(2), which declares tit is the national goal that, wherever attainable, an interim goal of water quality which provides for the protection and propagation of fish, shellfish, and wildlife and provides for recreation in and on the water be achieved by July 1, 1983." Agriculture, primary contact, municipal and industrial uses, recharge of domestic water supply via surface waters, and irrigation are other beneficial uses of Pueblo of Picuris waters. Contamination that may result from such uses shall not lower the quality of the water below what is required for recreation and the protection and propagation of fish, shellfish, and wildlife.

The Tribal Council enacts this Code in order to prevent, reduce, and eliminate pollution of Pueblo of Picuris waters and to plan the use of land and water resources within the Pueblo of Picuris' jurisdiction by:

- A. Designating the existing and attainable uses for which the surface water of the Pueblo of Picuris shall be protected;
- В. Prescribing water quality criteria (narrative and numeric) to sustain the designated uses;
- C. Assuring that degradation of existing water quality does not occur; and
- D. Promoting the social welfare and economic well being of the Pueblo of Picuris.

The criteria, numeric and narrative, contained in this Code are hereby part of the permitting and management processes of the Pueblo of Picuris. These criteria shall be used to determine when a designated use is threatened. If criteria are not met, the permitting and management process may be expected to require advanced treatment technologies for point sources and to implement such best management practices as are applicable for nonpoint sources.

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<#>Designate the existing and attainable uses for which the surface water of the Picuris Pueblo (hereinafter: "the Pueblo"), shall be protected;¶

- <#>Prescribe water quality criteria (narrative and numeric) to sustain the designated uses; ¶
- <#>Assure that degradation of existing water quality does not occur; and ¶
- <#>Promote the social welfare and economic well being of the Pueblo.¶

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The Code applies to all Tribal waters, as defined in SECTION VI of this Code. Waters that do not combine with other surface or subsurface waters, such as stock tanks or treatment lagoons, are private waters and excluded from the Code. The water quality criteria apply to substances attributable to discharges, nonpoint sources, or instream activities. The water quality criteria shall not apply to acts of God or to natural phenomena. The Code applies to all persons and all property within the Reservation, as that term is defined in SECTION VI.

#### 4. GENERAL PROVISIONS

**A.** Anti-degradation Policy – The anti-degradation policy for Tribal Waters and the procedures for implementing it are in SECTION II of this Code.

B. General Water Quality Standards - The general water quality standards in SECTION III of this Code shall be maintained at all times and apply to streams, lakes, reservoirs, canals, drains, ponds, springs, and wetlands, whether they are perennial, ephemeral, or intermittent waterbodies. Numeric criteria particular to a use shall be maintained any time the flow equals or exceeds the four-day three-year low flow value ("4Q3"). When intermittent and ephemeral streams have a low flow value of zero, all discharges shall meet standards for the designated uses. The criteria assigned to a waterbody are the ones required to sustain all designated uses of the waterbody. The water that is within reservoirs used for water treatment are exempt from these criteria but the criteria apply to receiving bodies of water affected by the effluent from such reservoirs. The Pueblo of Picuris shall issue and approve surface water designations for Tribal Waters and shall determine the suitability of bodies of water for primary contact purposes.

C. Environment Department – The Pueblo of Picuris Environment Department ("Environment Department") shall serve under the direction of the Governor and the Tribal Council of the Pueblo. The Environmental Department shall work in cooperation with the U.S. Environmental Protection Agency ("U.S. EPA") and other agencies of Federal, Tribal, and State governments. The duties of the Environmental Department are detailed in the Implementation Plan (SECTION II of this Code).

D. Revisions and Public Hearing – In accordance with section 303(c)(1) of the Clean Water Act. 33 U.S.C. § 1313(c), a public hearing shall be held at least once each three-year period for the purpose of reviewing the Code and proposing amendments, as appropriate, or to incorporate by reference other regulations. Revisions to the Code shall be conducted pursuant to SECTION VII and shall include relevant scientific and engineering advances with respect to water quality and waste treatment. If water quality monitoring identifies reaches where attainable quality is less than existing water quality standards, the standards may be modified to reflect attainability. Modification shall be carried out in accordance with use attainability analysis procedures, development of a site specific standard, or other appropriate methods. The Pueblo of Picuris will correct errors resulting from inadequate and erroneous data or human or clerical oversight. The discovery of such errors does not render the unaffected standards invalid.

**E.** Compliance Schedules.—It is the policy of the Pueblo of Picuris to allow on a case-by-case basis the inclusion of a compliance schedule in a National Pollutant Discharge Elimination System ("NPDES") permit issued to an existing facility. Such a schedule will provide a permittee with adequate time, not to exceed three years, to make treatment modifications so that the resulting effluent meets final permit requirements. Compliance

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General Standards-The General Standards

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Environmental Office-The Picuris Pueblo Environmental

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schedules may be included in NPDES permits at the time of permit reissuance or modification and shall require compliance at the earliest practicable time before the three-year limit has expired. Duration and schedule of activities shall also be specified to measure progress toward final project completion.

F. Variances – The Pueblo of Picuris may allow variances from the water quality standards on a case-by-case basis. A variance from the Pueblo's criteria may be allowed in certain cases where the appropriateness of the specific criteria is questionable. The variance provides a period of time during which issues concerning the appropriateness of the criteria may be resolved. A variance shall be valid for no more than three years. Variances are not renewable but may be reissued again upon adequate justification. A variance shall be granted only after appropriate public participation and EPA review and approval. Variances from criteria will be allowed for anticipated non-attainment of water quality standards due to one or more of the reasons listed in 40 CFR §131.10(g). Variances from criteria are for specific pollutants, time-limited, and shall not supersede the currently designated use. Variances are to be issued instead of removing a designated use for a waterbody where such use is not now attainable but can be expected with reasonable progress towards water quality.

Short Term Exceedances - The Environment Department with approval from the Tribal Council may authorize short-term activities, that might cause a violation of the Pueblo's water quality standards. Such authorization shall not be granted for activities that could result in an adverse impact on any federally endangered or threatened species or on the critical habitat of such species or that could result in the irreversible degradation of the water quality. The Environment Department shall specify the degree of exceedance, the time limit, and restoration procedures where applicable. The Environment Department may include additional requirements for short-term exceedances in related environmental regulations such as a Water Quality Management Plan. These short-term activities may take place whenever necessary and without public notice, provided that the Environment Department determines they are necessary to accommodate legitimate emergencies or basic community needs, or to protect public health and welfare, and that no permanent or long-term impairment of beneficial uses is likely to result. Examples of such activities include but are not limited to bank stabilization, mosquito abatement, algae and weed control, tracers used in hydrological studies, or activities, that result in overall enhancement or maintenance of beneficial uses. Short Term Exceedances are not intended to supersede existing Tribal, Federal, or State permitting processes or requirements.

**H. Dispute Resolution Mechanism** - Disputes due to differing water quality standards between the Pueblo <u>of Picuris</u> and a State or between the Pueblo and another Tribe shall be resolved using the Dispute Resolution Mechanism promulgated by the <u>U. S.</u> EPA in 40 CFR Section 131.7.

I. Biological Integrity of the Aquatic Community - Biocriteria will be applied to protect all categories of waters with an aquatic life use. Biological Integrity, the protection of aquatic communities to their most natural condition, shall be protected and maintained through this narrative Biocriteria statement. In addition, assessments including the sampling of the aquatic community and the use of multi-metric indices also serve as Biocriteria to maintain and protect biological integrity. The biological community structure and function, as well as the physical habitat shall be assessed, maintained, protected, and restored to the highest potential use.

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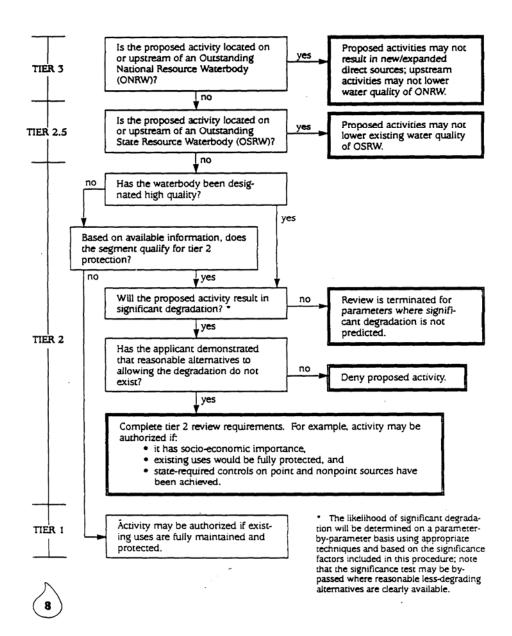
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The application of biological criteria will be based on the requirement that the biolog integrity of the waters impacted by point and non-point source pollution, and of anthropogenic impacts, will not be significantly impaired when compared with similar leading impacted watersheds.	ther
The reference conditions shall be determined by consistent sampling and relia measures of indicative aquatic communities (e.g. benthic macroinvertebrate and fish communistructure) established by the Environmental Department and may be used in conjunction vaccepted chemical, physical, microbiological and toxicological water quality measurements, records as deemed necessary for the purpose.	nity vith Deleted: Picuris Pueblo
J. Severability – If any provision of this Code or the application of any provision this Code to any person or circumstance is held to be invalid, the remainder of the Code and application of such provision to other persons and circumstances shall not be affected thereby	the Right: 0 pt
SECTION II. ANTI DEGRADATION POLICY AND IMPLEMENTATION PLAN,  1. ANTI DEGRADATION POLICY	Deleted: ,  Deleted: ¶  Anti degradation Policy¶  ¶
Existing water uses and the level of water quality necessary to protect existing uses so be maintained and protected.	hall
It is a goal that all waters will achieve levels necessary to support propagation of f aquatic assemblages, wildlife, recreation, and ceremonial use, unless it is found by the Pueblo Picuris that a lower level of water quality is required in order to accommodate important trieconomic or social development in the area in which the waters are located (Tier 2). High qua waters may be specifically identified in future triennial revisions, based on further assessmen water quality. Degradation of water quality may not occur without full satisfaction governmental and public participation requirements. In permitting such degradation of water quality, the Pueblo of Picuris shall require the highest statutory and regulatory requirements all new and existing point sources and such best management practices as are applicable nonpoint source control. See Figure 1.	D of ibal lity t of of ater for
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FIGURE 1
ANTIDEGRADATION IMPLEMENTATION FLOW CHART



Source: EPA

Where high quality water constitutes an outstanding national or tribal resource or the waters are of exceptional recreational or ecological significance, the water quality and uses shall be maintained and protected by water quality controls, maintenance of natural flow regimes, protection of instream habitats, and pursuit of land use practices protective of the watershed.	
In those cases where thermal discharge may impair water quality, the anti degradation policy and implementing methods shall be consistent with Section 316 of the Clean Water Act, 33 U.S.C. § 1326 as amended.	Deleted: as amended [(
\	Deleted: (1987)]
2. IMPLEMENTATION PLAN AND DUTIES OF THE ENVIRONMENT  DEPARTMENT	Deleted: ¶ Implementation Plan and Duties of the Environmental Department Office¶
The Environment Department acting under authority delegated by the Tribal Council	The Environmental Department Office
shall implement the water quality standards and the anti-degradation policy by establishing and	Formatted: Line spacing: single
maintaining controls on the discharge of pollutants to surface waters. The Environment	Deleted:
Department Office shall, subject to availability of funds:	
Department office shart, subject to availability of funds.	Deleted: ¶
A. Work in conjunction with Federal, Tribal, and State agencies as appropriate;	Deleted: al
B. Establish and maintain controls on the discharge of pollutants to surface waters.	Formatted: Font: Not Bold, No underline, Font color: Auto
Such controls shall be carried out in a stepwise process involving several interrelated	Deleted: -
programs;	Deleted: -
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C. Recommend to the Tribal Council any permitting or management regulations	Deleted: -
which would be consistent with the <u>water quality standards</u> . The Tribal Council may set	Deleted: Water Quality Standards
permit requirements in addition to those of this Code when enacted;	beleted. Water Quanty Standards
permit requirements in addition to those of this code when endeted,	
D. Obtain information pertinent to the effect of the effluent on the receiving waters	Deleted: -
and advise the prospective discharger of requirements for obtaining a permit to discharge,	
including any permit requirements as the Pueblo of Picuris itself may enact subsequent to	Deleted: Waters
the enactment of this Code;	
E. Assess the probable effects of effluent on receiving waters relative to the	Deleted: -
designated uses and numeric and narrative standards;	
F. Designate Pueblo streams as perennial, ephemeral or intermittent in accordance	Deleted: -
with the <u>Code</u> and determine low flow numeric values;	
· · · · · · · · · · · · · · · · · · ·	Deleted: Pueblo Water Quality Standards
G. Conduct water quality surveillance of Pueblo of Picuris waters to assess the	Deleted: -
effectiveness of pollution controls and prevention and to determine whether water quality	
standards are being attained. Include a review of existing database adequacy and obtain	
any needed data by conducting an intensive analytical survey of the receiving waters;	
H. Conduct biological monitoring of fish, invertebrate, and plant communities,	Deleted: -
including habitat assessments. Assess physical and chemical factors relative to heavy	Deleted: bioassay
metals and toxic substance contamination in water, sediment, and aquatic organisms.	
Evaluate whether instream flows are sufficient to support designated uses.	Deleted: and sediment quality to aAssess the
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J. Require the highest level and best degree of wastewater treatment practicable to protect and maintain the designated uses and existing water quality of the receiving waters;	Deleted: -
J. Submit requirements of or comments on effluent limitations for inclusion in any	Deleted: -
Federal permit issued to a discharger pursuant to Section 402 or 404 of the Clean Water	
Act (33 U.S.C. § 1342). These effluent limitations shall be included in any such permit	
as a condition for Tribal certification pursuant to Section 401 of the Clean Water Act (33	
U.S.C. § 1341);	
C.D.C. § 1311),	
K. Develop and pursue inspection and enforcement programs which will ensure that	Deleted: -
dischargers comply with requirements of these <u>water quality standards</u> , satisfy the	Deleted: Water Quality Standards
requirements of any later Pueblo of Picuris permit regulations, and complement EPA's	Dolotodi Water Quanty Standards
enforcement of Federal permits;	
omoromon or rotation,	
L. Ensure that the provisions for public involvement required by the Code, the Clean	Deleted: -
Water Act, and applicable federal regulations are followed:	Deleted: Water
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M. Provide continuing technical training for wastewater treatment facility operators	Deleted: (40 CFR Part 25)
through the utility operators training and certification programs;	Deleted: -
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N. Seek funds to assist the construction of Pueblo of Picuris owned wastewater	Deleted: -
treatment facilities; for example, through the construction grants program authorized by	
Section 201 of the Clean Water Act (33 U.S.C. § 1281);	
O. Encourage, in conjunction with other agencies voluntary implementation of best	Deleted: -
management practices noted for controlling non point source pollution, and to comply	
with the <u>Code</u> and with the Clean Water Act;	Deleted: Water Quality Standards
P. Evaluate effectiveness of best management practices selected to prevent or abate	Deleted: -
non-point sources of water pollutants:	
SECTION III. GENERAL WATER QUALITY STANDARDS	
Watercourses shall be free of any water contaminant in such quantity and of such	
duration as may with reasonable probability injure human health, animal or plant life, or	
property, or unreasonably interfere with the public welfare or the use of property. In addition,	
the following narrative standards apply to all <u>Tribal</u> waters, unless stricter standards are imposed	Deleted: Pueblo
in <u>Section</u> IV.	Deleted: section
A Characan Bottom Domosita The statement shall be fore from sentencia ante-	Formattad, Fort. Rold
<b>A.</b> Stream Bottom Deposits. The stream shall be free from water contaminants from other than natural causes that will settle and cause deleterious effects to the aquatic biota or	Formatted: Font: Bold
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significantly alter the physical or chemical properties of the bottom.	
B. Floating Solids, Oil, and Grease. All Tribal waters shall be free from	Formatted: Font: Bold
objectionable oils, scum, foam, grease, and other floating materials and suspended substances of	Tormatted. Form. Bold
a persistent nature resulting from other than natural causes (including visible films of oil,	
globules of oil, grease, or solids in or on the water, or coatings on stream banks and stream	Deleted: ¶
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bottoms),or that would damage or impair the normal growth, function or reproduction of wildlife, plant, or aquatic life.

C. Color. Materials producing true color resulting from other than natural causes shall not create an aesthetically undesirable condition; nor should color impair the attainable uses of the water nor harm aquatic life.

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**D.** Odor and Taste. Water contaminants from other than natural causes shall be limited to concentrations that will not impart unpalatable flavor to fish, or result in offensive odor or taste arising from the water, or otherwise interfere with the existing and attainable uses of the water, nor shall taste and odor-producing substances of other than natural origin interfere with the production of a potable water supply by modern treatment methods.

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**E.** Nuisance Conditions. Plant nutrients or other substances stimulating algal growth from other than natural causes shall not be present in concentrations which will produces objectionable algal densities, nuisance aquatic vegetation, result in a dominance of nuisance species instream, or otherwise cause nuisance conditions. When stricter requirements are not established elsewhere in this code, the dissolved oxygen shall be maintained at 2 mg/l in order to prevent nuisance conditions from other than natural causes. The phosphorus and nitrogen concentrations shall not be increased to levels which result in man-induced eutrophication problems. The Tribal Council may establish nutrient limitation for lakes, reservoirs, and streams, and shall incorporate such limitations into appropriate water quality management plans.

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**F.** Pathogens. The stream shall be virtually free from pathogens which include bacteria, viruses, or parasites. In particular, waters used for irrigation of table crops such as lettuce shall be virtually free of *Salmonella* and *Shigella* species.

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Intribidity. Turbidity attributable to other than natural causes shall not reduce light transmission to the point that the normal growth, function, or reproduction of aquatic life is impaired or that will cause substantial visible contrast with the natural appearance of the water. Turbidity shall not exceed 5 NT'U over natural background when natural background turbidity is 30 NTU or less; there shall not be more than a 10% increase in turbidity when background turbidity is more than is 30 NTU. Background turbidity shall be measured at a point immediately upstream of the turbidity-causing activity. However, limited-duration activities necessary to accommodate dredging, construction or other activities and that cause the criterion to be exceeded may be authorized provided all practicable turbidity control techniques have been applied and all appropriate permits and approvals have been obtained. Written approval from the Tribal Council will require the Environment Department to provide technical background for each permit. For activities that are not regulated under Clean Water Act permits, implementation of the Pueblo of Picuris' approval process will require regulation under Pueblo of Picuris law.

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**H.** Mixing Zones. If a discharge permit applicant can prove to the satisfaction of the Pueblo Tribal Council that water quality criteria can be achieved and maintained through instantaneous mixing, some dilution may be allowed (e.g., through the use of high rate diffusers). Such allowances will granted on a case-by-case basis. The size of mixing zones shall be less than 1/3 of the cross-sectional area or critical stream flow at or above 4Q3 conditions of the receiving stream. In intermittent or ephemeral streams, discharges shall meet all applicable numeric and narrative criteria at the point of discharge. There shall be no acute toxicity in the mixing zone. Numeric acute criteria shall be attained at the point of discharge. There shall be no chronic

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toxicity at the edge of the mixing zone. Numeric chronic criteria shall be attained at the edge of the mixing zone. Mixing zones are not allowed for discharges to publicly owned lakes or reservoirs; these effluents shall meet all applicable numeric and narrative criteria at the point of discharge. Mixing zones shall not overlap ceremonial or recreational sites. Requirements for mixing zones shall be consistent with those established in other regulations such as water quality management plans and implementation plans developed by the Pueblo of Picuris or by the U.S. EPA.

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In any waters receiving a waste discharge, a continuous zone must be maintained where the water is of adequate quality to allow the migration of aquatic life with no significant effect on their population. This is known as a zone of passage.

**I.** Radioactivity. Unless otherwise outlined in these standards, the radioactivity of surface water shall be maintained at concentrations which do not exceed the maximum natural background concentrations in surface waters of the Pueblo of Picuris.

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Itemperature. The introduction of heat by other than natural causes shall not increase the temperature, outside the mixing zone, by more than 2.7° C (5° F) in a stream, based upon the monthly average of the maximum daily temperatures measured at mid-depth or three feet (whichever is less) outside the mixing zone. In lakes, the temperature of the water column or epilimnion (if thermal stratification exists) shall not be raised more than 1.7° C (3° F) above that which existed before the addition of heat of artificial origin, based upon the average of temperatures taken from the surface to the bottom or surface to the bottom of the epilimnion (if stratified). The normal daily and seasonal variations that were present before the addition of heat from other than natural sources shall be maintained. In no case shall man-introduced heat be permitted when the maximum temperature specified for the reach (20° C/68° F for cold water fisheries and 32.2° C/90°F for warm water fisheries) would thereby be exceeded. High water temperatures caused by unusually high ambient air temperatures are not violations of these standards.

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**K.** Salinity/Mineral Quality (total dissolved solids, chlorides, and sulfates). Existing mineral quality shall not be altered by municipal, industrial, and instream activities, or other waste discharges so as to interfere with the designated uses. No increase exceeding 1/3 over naturally occurring levels may be permitted. Numeric criteria for chlorides at 230 mg/l, for sulfates at 250 mg/l, and for total dissolved solids at 500 mg/l shall not be exceeded.

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**L.** The **pH** of a stream or a lake shall not fluctuate in excess of 1.0 pH unit over a period of 24 hours for other than natural causes.

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M. <u>Dissolved Oxygen.</u> If the stream is capable of supporting aquatic life, the dissolved oxygen standard shall not be less than 5 mg/l.

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**N. Dissolved Gases.** Surface water shall be free of nitrogen and other dissolved gases at levels above 110% saturation when this supersaturation is attributable to municipal, industrial or other discharges.

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<u>O</u> <u>Toxic Substances.</u> Toxic substances such as, but not limited to, pesticides, herbicides, heavy metals, and organic solvents, shall not be present in receiving waters in such quantities as to be toxic to human, animal, plant, or aquatic life nor as to interfere with the

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normal propagation, growth, and survival of the sensitive indigenous aquatic biota. For lists of the applicable toxic substances, criteria published, and sensitive indigenous species/lifestages, reference should be made to the procedures implementing this toxic substances narrative contained in the rules, regulations, and guidelines of the Environmental Protection Agency, or any rules, regulations and guidelines adopted by the Pueblo of Picuris subsequent to adoption of these standards. Within the mixing zone, there shall be no acute toxicity. There shall be no chronic toxicity at the edge of the mixing zone.

P. Biomonitoring testing following current EPA test methods shall be used to determine compliance with the narrative criteria. For substances lacking EPA published criteria, biomonitoring data may be used to determine compliance with this narrative standard in accordance with EPA standard acute and chronic biological test protocols. These protocols can be found in U.S. EPA Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, EPA 821-R-02-012 (October 2002), Post Third Round NPDES Permit Implementation Strategy (adopted October 1, 1992), Short-Term Methods-for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms EPA 821-R-02-013 (October 2002), Technical Support Document For Water Quality-based Toxics Control, (EPA\505\2-90-001, March 1991)., Quality Criteria for Water, 1986 or the most current version thereof. If the Pueblo of Picuris needs to derive numeric criteria, without actually conducting toxicity tests, they shall use the AQUIRE (Aquatic Toxicity Information Retrieval) database EPA's Guidance, Guidelines for Deriving Numerical National Water Quality Criteria for the Protection of Aquatic Organisms and their Uses.

In the event that sufficient data is not available to derive a numeric criterion following the above guidance, the Pueblo of Picuris may use the results of toxicological studies to calculate a criterion based on the following methods:

 a) concentrations of non-persistent toxic materials shall not exceed concentrations which are chronically toxic (as determined from appropriate chronic toxicity data or calculated as 10% of LC50 values) to representative, sensitive aquatic organisms.

- concentrations of persistent toxic materials that do not bioaccumulate shall not exceed concentrations which are chronically toxic (as determined from appropriate chronic toxicity data or calculated as 5% of LC50 values) to representative, sensitive aquatic organisms; and
- c) concentrations of toxic materials that bioaccumulate shall not exceed concentrations, which are chronically toxic (as determined from appropriate chronic toxicity data or calculated as 1% of LC50 values) to representative, sensitive aquatic organisms.

Toxicants in the receiving water known to be persistent, bioaccumulative, carcinogenic, synergistic with other waste stream components, or antagonistic with non-waste stream components will be addressed on a case-by-case basis.

**Q.** Water Flow. In order to improve controls over nonpoint sources of pollution, Tribal, Federal, State, and local resource management agencies will be encouraged and assisted to coordinate planning and implementation of programs to regulate or control runoff, erosion,

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turbidity, stream temperature, stream flow, and the withdrawal and use of irrigation water on a watershed approach so as to protect the quality and beneficial uses of water and related resources. Such programs may include, but not be limited to, the following:

a) Development of projects for storage and release of suitable quality waters to augment low stream flow;

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b) Runoff control to reduce erosion;

c) Possible modification or irrigation practices to reduce or minimize adverse impacts from irrigation return flows;

d) Stream bank erosion reduction projects;

e) Federal water quality restoration plans; and

f) Possible modification in snowmaking practices to reduce or minimize adverse impacts from snow melting return flows.

Perennial rivers and streams within the watershed shall be retained with minimal base flows of 5.0 c.f.s., which is the minimal flow necessary to provide for preservation of wildlife, fish, scenic, aesthetic, traditional and other environmental values, and navigational values. Lakes and ponds shall be retained substantially in their natural condition. Withdrawals of water which would conflict therewith shall be authorized only in those situations where it is clear that overriding considerations of the public interest will be served.

Federal, State, local, tribal governments, individuals, corporations, groups, acequia associations and other entities shall be encouraged to carry out practices of conservation as they relate to the use of Tribal waters. In addition to traditional development approaches, improved water use efficiency and conservation shall be emphasized in the management of Tribal waters and in some cases will be a potential new source of water with which to meet future needs throughout the Reservation.

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#### SECTION IV. WATER BODY USES AND SPECIFIC WATER OUALITY STANDARDS

#### 1. DESIGNATED USES

A. The following water body uses and the standards pertaining thereto shall apply to the eastern portions of the Rio del Pueblo and to the Rio Santa Barbara and to other perennial tributaries above (east of) the confluence of the Rio del Pueblo and the Rio Santa Barbara. The criteria for uses above said confluence shall also apply to perennial tributaries to the Rio del Pueblo and the Rio Santa Barbara, wetlands along these waters including tributaries associated with those wetlands, and any other perennial standing waters along the Rio del Pueblo and Rio Santa Barbara: Recharge of domestic water supply, fish culture, high quality cold water fishery, irrigation, livestock watering and wildlife habitat, municipal and industrial water supply, and primary contact use.

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C. The following water body uses and the standards pertaining thereto shall apply to all intermittent or ephemeral streams, including any associated with standing water and wetlands: livestock watering and wildlife habitat, irrigation, and primary contact use.  2. SPECIFIC WATER QUALITY STANDARDS  A. HIGH QUALITY COLDWATER FISHERY USE.  Criteria for High Quality Coldwater Fishery Use incorporates Acute and Chronic Fisheries Criteria with the following additions:  a) The dissolved oxygen shall not be less than 6.0 mg/l, or 85% of saturation, whichever is greater.  b) Temperature shall not exceed 20° C (68° F).  C) pH shall be within the range of 6.6 to 8.8.  d) Total phosphorus (as P) shall not exceed 0.1 mg/l.  Eor	matted: No underline matted: No underline matted: No underline eted: matted: Font: Bold matted: Indent: Left: 36 pt eted: 1. matted: matted:
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Conductivity (at 25°C) shall not exceed 300 umbersom and 1500 4	matted [10]
umbos/cm depending on the natural background of particular stream	
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Tables for total ammonia can be found in appendix # 1.	matted [12]
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i) Total residual chlorine shall not exceed 0.002 mg/l.	matted [13]
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Total inorganic nitrogen (as N) shall not exceed 1.0 mg/l.	matted [14]
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consumption rate of 0.0175 kg/day.	matted: Font: Bold
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1) Water flow shall not be less than 5.0 c.f.s.	eted: <u>.</u>
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B. MARGINAL COLDWATER USE.	matted: Font: Bold
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	ronic Fishery Criteria also a		<b>4</b>	Formatted: Tabs: Not at 28.8 pt
<u>a)</u>	Dissolved oxygen shall no	t be less than <b>6.0 mg/l</b> .		Deleted: 1.
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<u>b)</u>	Temperature shall not exc	ceed <b>25° C</b> .		
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<u>c)</u>	<b>pH</b> shall be in the range of	6.6 to 9.0.		
	Tables for total ammonia	aga ha faga dia annondia #1		Deleted: 4.
<u>d)</u> ▼	1 ables for total ammonia	a can be found in <b>appendix #1</b> .		Formatted: Indent: Left: 36 pt, First line: 36 pt
<u>e)</u>	Total residual chlorine sh	nall not exceed <b>3 ug/l</b> .		Deleted: _ 5.
				Deleted: 6.
<u>f)</u>		ot exceed <b>0.3 mg</b> /kg based on a total fish	<b>4</b>	Formatted: Indent: Left: 72 pt,
	consumption rate of <b>0.017</b>	<mark>5 kg/day.</mark>		Hanging: 36 pt
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g)	Water flow shall not be les	<u>s than 5.0 c.f.s.</u>		Formatted: Font: Bold, Underline, Font color: Red
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<u>a)</u>	<b>Dissolved oxygen</b> shall no	t be less than <b>5 mg/L</b> .	'''	
	Temperature shall not exc		,' ',	Formatted: No underline
<u>b)</u>	remperature shan not exc	seed 32.2 C (90 F)	,',',	Formatted: Font: Bold
c)	<b>pH</b> will be within the range	e of 6 0 to 9 0	,',','	Deleted: 1.
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<u>e)</u>	Total residual chlorine sh	nall not exceed 3 ug/l.	\\\\\\\	Deleted: _4.
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<b>V</b>			``	Deleted: 5.
<u>•</u> <u>f)</u>		ot exceed 0.3 mg/kg based on a total fish	, ``,	
<u>f)</u>	Methylmercury shall no consumption rate of <b>0.017</b>		, `	Poleted: 5.  Formatted: Indent: Left: 36 pt, First line: 36 pt
	consumption rate of <b>0.017</b>	<u>5 kg/day.</u>		Formatted: Indent: Left: 36 pt,
<u>f)</u>		<u>5 kg/day.</u>		Formatted: Indent: Left: 36 pt, First line: 36 pt
<del>-</del>	Consumption rate of <b>0.017</b> Water flow shall not be less	s than 5.0 c.f.s.		Formatted: Indent: Left: 36 pt, First line: 36 pt
	Consumption rate of <b>0.017</b> Water flow shall not be less	<u>5 kg/day.</u>		Formatted: Indent: Left: 36 pt, First line: 36 pt  Deleted: 6.
<u>g)</u>	Consumption rate of <b>0.017</b> Water flow shall not be less	S kg/day. S than 5.0 c.f.s. CRY CRITERIA		Formatted: Indent: Left: 36 pt, First line: 36 pt  Deleted: 6.  Deleted: 3
g)  The following <b>num</b> analyte	Consumption rate of 0.017  Water flow shall not be less  ACUTE FISHE  Beric criteria shall not be excepted.	S kg/day. S than 5.0 c.f.s. CRY CRITERIA	<:	Formatted: Indent: Left: 36 pt, First line: 36 pt  Deleted: 6.  Deleted: 3
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g)  The following <b>num</b> nalyte issolved unless otherwi luminum	Consumption rate of 0.017  Water flow shall not be less  ACUTE FISHE  Beric criteria shall not be excepted.	ERY CRITERIA  ceeded. Concentration (µg/l) 750 340		Formatted: Indent: Left: 36 pt, First line: 36 pt  Deleted: 6.  Deleted:
g)  The following num nalyte issolved unless otherwi luminum rsenic	Consumption rate of 0.017  Water flow shall not be less  ACUTE FISHE  Beric criteria shall not be excepted.	ERY CRITERIA  ceeded.  Concentration (µg/l)  750	<:	Formatted: Indent: Left: 36 pt, First line: 36 pt  Deleted: 6.  Deleted:
g) The following numnalyte Issolved unless otherwick Iuminum Irsenic Eryllium	Consumption rate of 0.017  Water flow shall not be less  ACUTE FISHE  Beric criteria shall not be excepted.	ERY CRITERIA  ceeded. Concentration (µg/l) 750 340	<<	Formatted: Indent: Left: 36 pt, First line: 36 pt  Deleted: 6.  Deleted:
The following <b>num</b> nalyte issolved unless otherwi luminum rsenic eryllium admium	Consumption rate of 0.017  Water flow shall not be less  ACUTE FISHE  Beric criteria shall not be excepted.	ERY CRITERIA  Ceeded.  Concentration (µg/l)  750 340 130	<<	Formatted: Indent: Left: 36 pt, First line: 36 pt  Deleted: 6.  Deleted:
The following num analyte dissolved unless otherwith aluminum arsenic deryllium dadmium	Consumption rate of 0.017  Water flow shall not be less  ACUTE FISHE  Beric criteria shall not be excepted.	ERY CRITERIA  Ceeded.  Concentration (µg/l)  750 340 130		Formatted: Indent: Left: 36 pt, First line: 36 pt  Deleted: 6.  Deleted:
<u>g)</u>	Consumption rate of 0.017  Water flow shall not be less  ACUTE FISHE  Beric criteria shall not be excepted.	ERY CRITERIA  Ceeded.  Concentration (µg/l)  750 340 130		Formatted: Indent: Left: 36 pt, First line: 36 pt  Deleted: 6.  Deleted:

	<u>e</u> (1.10166[In(hardness)]-3.924)	
Chlordane, Total	2.4	
Chromium**	e (O.819(In(hardness)+2.5736))	
Copper	e <sup>(0.9422[In(hardness)] -1.7408)</sup>	
Cyanide, weak dissociable	22.0	
Lead	1.46203 – [In(hardness)(0.145712)] x e <sup>(1.273[In(hardness)] -1.46)</sup>	
Mercury, Total	24	
Nickel	e (0.8460(In(hardness)+2.253))	Deleted: 3.3612 +
Selenium, Total	20.0	
Silver	e (1.72 In(hardness)] - <u>6.7525</u> )	Deleted: -6.6825
Total Residual Chlorine	19	
Zinc	e <sup>(0.8473[In(hardness)]+0.8618)</sup>	
**The criteria for chromium shall be applied to	an analysis which measures both the trivalent and hexavalent ions.	

#### **CHRONIC FISHERY CRITERIA**

◆The following **numeric criteria** *shall not be exceeded.* 

The following numeric criteria shall not b	re exceeded.
Analyte (dissolved unless otherwise noted).	Concentration (µg/l)
Aluminum	87.0
Arsenic	150
Beryllium	5.3
Cadmium	5.3 1.101672-[In(hardness)(0.041838)] x e <sup>(0.7409[In(hardness)]-4.719</sup>
Chlordane (total)	0.0043
Chromium	e <sup>(0.8190[in(hardness)] +0.534)</sup>
Copper	e <sup>(0.8545 [ln(hardness)]-1.7428)</sup>
Cyanide, weak dissociable	5.2
Iron	1.0 mg/L
Lead	1.46203 – [In(hardness)(0.145712)] x e <sup>(1.273[In(hardness)]-4.705)</sup>
Mercury (total)	0.012
Nickel	e <sup>(0.8460[ln(hardness)]+0.0554)</sup>
Selenium (total)	5.0
Total Residual chlorine	11
Zinc	e <sup>(0.8473[ln(hardness)] +0.8699)</sup>
**The criteria for chromium shall be applied to an analysis	which measures both the trivalent and hexavalent ions.

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### D. LIVESTOCK WATERING & WILDLIFE HABITAT USE

◆The following numeric criteria shall not be exceeded.

Analyte (dissolved, except as noted)	Concentration (mg/L, except as noted)
Aluminum	5.0
Arsenic	200μg/L

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Boron	5.0
Cadmium	0.05
Chromium **	1.0
Cobalt	1.0
Copper	0.5
Cyanide, weak dissociable	5.2 μg/l
Lead	0.1
Mercury (total)	0.012 μg/l
Selenium (total)	0.002
Total residual chlorine	11 μg/l
Total DDT and metabolites	0.001µg/l
Total PCB's	0.014µg/l
Vanadium	0.1
Zinc	25.0
Radium ( <sup>226</sup> Ra + <sup>228</sup> RA)	30.0 pCi/L
Tritium	20,000 pCi/L
Gross alpha	15 pCi/L

<sup>\*\*</sup>The criteria for chromium shall be applied to an analysis which measures both the trivalent and hexavalent ions.

## E\_\_\_IRRIGATION USE

The monthly geometric mean of fecal coliform bacteria shall not exceed 1,000-colonies/100 ml; no single sample shall exceed 2,000-colonies/100 ml.

◆The following **numeric criteria** *shall not be exceeded.* 

Analyte (Dissolved)	Concentration (mg/L)
Aluminum	5.0
Arsenic	0.10
Boron	0.75
Cadmium	0.01
Chromium **	0.10
Cobalt	0.05
Copper	0.20
Lead	5.0
Molybdenum	0.01
Selenium (in the presence of <500mg/l SO <sub>4</sub> )	0.13
Vanadium	0.1
Zinc	2.0
Selenium (in the presence of >500mg/L of SO <sub>4</sub> )	0.25

<sup>\*\*</sup>The criteria for chromium shall be applied to an analysis which measures both the trivalent and hexavalent ions.

#### F. \_\_\_RECHARGE OF DOMESTIC WATER SUPPLY

◆ The following **numeric criteria** *shall not be exceeded*:

The following numeric crit	Ha shan hor be exceeded.	
Analyte	Concentration	
15		

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(dissolved except as noted)	(mg/L, except as noted)
Arsenic	0.05 <u>0.01</u>
Barium	2
Cadmium	0.005
Chromium**	0.1
Cyanide	0.2
Iron	0.3
Lead	0.05
Mercury (total)	0.002
Total Nitrates as N	10.0
Selenium	0.05
Silver	0.05
Radium (226Ra + 228Ral	5pCi/L
Uranium	<del>5.0</del> <u>0.03</u>
Tritium	20,000 pCi/L
Gross alpha	15 pCi/L

<sup>\*\*</sup>The criteria for chromium shall be applied to an analysis which measures both the trivalent and hexavalent ions.

### G. PRIMARY CONTACT

- a) The geometric mean maximum for fecal coliform bacteria shall not exceed 200 colonies per 100 ml. Compliance with this criteria shall be determined based on a minimum of 5 samples taken over a maximum of 30 days. A single sample maximum for fecal coliform bacteria shall not exceed 400 colonies per 100 ml. \*
- b) pH shall be within the range of 6.6 to 8.8,
- The total dissolved solids of mineral constituents shall not exceed 500 mg/L,
- d) Turbidity shall not exceed 10 NTU'S.
- <u>e)</u> The open water *shall be free from* algae in concentrations causing a nuisance condition or causing gastrointestinal or skin disorders.
- f) Water flow shall not be less than 5.0 c.f.s.

Primary contact <u>includes the</u> use of water for the practice of Indian religion and Indian traditional purposes by tribal members of the Pueblo <u>of Picuris</u>; such use involves the intentional and incidental ingestion of the water and immersion in the water. <u>It also includes recreational use of water, which involves prolonged contact and the risk of ingesting water in quantities sufficient to pose a health hazard; an example is swimming. <u>Primary contact also includes</u></u>

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<sup>\*</sup>The standards for *E. Coli*, shall not exceed a monthly geometric mean maximum of 126 colonies /100 ml and a single sample maximum of 235 colonies /100 ml, in accordance with an illness rate of 8 per 1000 exposures.

recreational use of water in which contact with the water need not occur and in which the Deleted: aAny probability of ingesting water is minimal; examples are fishing and boating. Deleted: the H. INDUSTRIAL AND MUNICIPAL WATER SUPPLY USE Formatted: No underline Formatted: Indent: Left: 36 pt, Hanging: 36 pt, Tabs: Not at 28.8 The General Water Quality Standards set forth in SECTION III apply to this use. Deleted: , FISH CULTURE USE. Deleted: Formatted: Indent: Left: 72 pt The General Water Quality Standards set forth in SECTION III apply to this use. Deleted: ¶ Formatted: Indent: Left: 36 pt, Hanging: 36 pt, Tabs: Not at 21.6 Formatted: No underline

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#### SECTION V. SAMPLING AND ANALYSIS

#### 1. SAMPLING

All methods of sample collection, preservation, and analysis used in determining water quality and maintenance of these standards shall be in accordance with procedures prescribed by the latest edition of: (1) American Public Health Association, "Standard Methods for the Examination of Water and Wastewater"; or (2) "Methods for Chemical Analysis of Water and Wastes"; or (3) U.S. EPA Guidelines Establishing Test Procedures for the Analysis of Pollutants, found in 40 CFR part 136, or (4) USEPA's Rapid Bioassessment Protocols for Use in Streams and Wadeable Rivers: Periphyton, Benthic Macroinvertebrates, and Fish (EPA-841-B-99-002), or (5) Other methods which may not be U.S. EPA approved may be used as determined to be appropriate by Environment Department, (i.e. Hach adaptation of U.S. EPA or Standard Methods).

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#### 2. BACTERIOLOGICAL SURVEYS

The monthly geometric mean is used in assessing attainment of standards when a minimum of five samples is collected in a 30-day period. No single sample shall exceed the upper limit for bacterial density, as set forth in <u>Section IV</u>, when less than 5 samples are collected in a 30-day period.

### 3. SAMPLING PROCEDURES

A. Stream monitoring stations below waste discharges shall be located outside the designated mixing zone.

**B.** Lakes Sampling in lakes, including artificial lakes, shall be located where the attainment of a water quality standard is to be assessed. Water quality measurements shall be taken at intervals in the water column at a sampling station. For toxic substances and nutrients, the entire water column shall be monitored. For dissolved oxygen in stratified lakes, measurements shall be made in the epilimnion. In non-stratified lakes, measurements will be made at intervals throughout the entire water column.

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C. Sampling Procedures:¶

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#### 4. BIOLOGICIAL SURVEYS

Biological Surveys: any biological assessment program which is undertaken shall be established in accordance with U.S. EPA's Rapid Bioassessment Protocols for Use in Streams and Wadeable Rivers; Periphyton, Benthic Macroinvertebrates, and Fish (EPA 841-B-99-002) or other established procedures, such as River Watch Network adaptation of EPA Rapid Bioassessment Protocol II. As needed, artificial collection sites shall be installed in lowland streambeds to determine potential species diversity under improved stream conditions.

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#### SECTION VI. DEFINITIONS

**Absorption-** The uptake of water or dissolved chemicals by a cell or organism.

**Acute-** A stimulus severe enough to rapidly induce an effect; in aquatic toxicity tests, an effect observed in 96 hours or less typically is considered acute. When referring to aquatic toxicity or human health, an acute effect is not always measured in terms of lethality.

**Acute Exposure-** Usually, a single exposure or a cluster of exposures within a single 24-hour period.

**Acute Toxicity-** Toxicity which exerts short-term lethal impacts on representative organisms with a duration of exposure generally less than or equal to 48 hours. This will be quantified as a statistically significant difference at the 95% confidence level between survival in the appropriate test organism and a control. Other methods may be used to determine acute effects other than lethality such as, but not limited to behavioral changes or immobilization. See EPA 821-R-02-012, Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms.

**Adsorption-** The process by which chemicals are held on the surface of a mineral or soil particle.

Agricultural Water Supply Use- The use of water for irrigation.

**Algae-** Simple plants without roots, stems, or leaves which contain chlorophyll and are capable of photosynthesis.

**Alkalinity-** The property of water that resists or buffers against changes in pH upon addition of acid or base.

"Allowable Frequency"- The period of time EPA assumes that it will take ecosystems to recover after they have been subjected to chemical stressors. EPA has selected 3 years as their allowable frequency of exceedances.

Ambient- Environmental or surrounding conditions.

**Ambient Concentration-** The concentration or quantity of chemicals that can be expected to occur in the aquatic environment in water, sediment, and food.

**Antagonistic Effects-** When two chemicals interfere with the actions of each other.

Anthropogenic Effects- Human induced.

Antidegradation Implementation- Existing, approved antidegradation statements consistent with 40 CFR §131.12 may be retained, but procedures for implementation must be established through the State water quality management process (WQM). These procedures will enable the Tribe to determine on a case-by-case basis whether, and to what extent, water quality may be lowered.

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**Antidegradation Policy-** 40 CFR §131.6 requires each State to include an antidegradation policy consistent with 40 CFR §131.12 when submitting water quality standards to EPA. These policies are designed to protect water quality and provide a method of assessing activities that may impact the integrity of the waterbody.

**Aquaculture-** The cultivation of the natural produce of water such as fish and shellfish as covered in Section 318 of CWA.

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Aquatic Biota- Animal and plant life in the water.

**Aquatic Communities-** A biological association consisting of all interacting populations of aquatic species inhabiting a given area or region.

**Aquatic Life Criteria-** Constituent concentrations, levels, or narrative statements, representing a quality of water that is protective of aquatic life.

Aquifer Any geological formation containing water, especially one that supplies water for wells, springs, etc.

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**Arbitrator-** EPA employees, employees from other Federal Agencies, or other qualified individuals agreed upon by all parties and who will know the requirements of water quality standards program, will have a basic understanding of the political and economic interests of Tribes, and are expected to fulfill their duties fairly and impartially.

**Artificially Created Waters-** Man-made waters including irrigation ditches, canals, and created wetlands. The need to develop water quality standards for artificially created waters is determined by EPA and the Tribe on a case-by-case basis.

**ASTM-** Standard procedures for conducting laboratory testing as defined by the American Society of Testing and Materials (ASTM).

**Attainable use-** "Attainable use" means a use of surface water which has water quality and all other characteristics necessary to support and maintain the use, as specified in Section IV of these standards, or which would support and maintain the use after the implementation of water quality standards as set forth in this Water Code.

**Averaging Periods-** The period of time over which the ambient concentration is averaged for comparison with criteria concentrations.

Benthic Macroinvertebrates- The invertebrate organisms living in the water.

**Best Management Practices** - Practices undertaken to control, restrict, and diminish nonpoint sources of pollution, that are consistent with the purposes of the Pueblo Water Quality Standards and with the narrative and numeric standards contained therein; measures, sometimes structural, that are determined to be the most effective practical means of preventing or reducing pollution of water bodies from nonpoint sources.

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**Bioaccumulation** – The process by which a compound is taken up by an aquatic organism, both from water and through food.

**Bioaccumulation Factor\_-** (BAF) The ratio of the concentration of a chemical in the tissues of an aquatic organism to its concentration in the water. Considered where the organism <u>and</u> the food chain are exposed.

**Bioassay\_-** A toxicity test using selected organisms to determine the acute or chronic effects of a chemical pollutant or whole effluent.

**Biomagnification -** The process of a chemical accumulating in a biological food chain by being passed from one organism to another as the contaminated organism is preyed upon by another organism.

**Bioconcentration** – The process by which a compound is absorbed from water through gills or epithelial tissues and is concentrated in the body.

Carcinogenic - Cancer producing.		Deleted: :
<b>c.f.s.</b> - cubic feet per second.		Deleted: fs:
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Chronic Toxicity - Toxicity which exerts sub-lethal effects, such as the impairment of growth or		Deleted: :
reproduction, or which becomes lethal after long-term exposure, generally measured in a 7-day		
test on representative organisms. This will be quantified as a statistically significant difference		
at the 95% confidence level between the survival and/or reproduction or growth of the		
appropriate test organism and the control. See EPA-821-R02-013, Short Term Methods for	-=[	Formatted: Not Strikethrough
Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms.		Deleted: <u>/600/4-91/002</u> <u>EPA</u>
Coldwater fishery - A stream reach, lake or impoundment where the water temperature and		Deleted: :
other characteristics are suitable for the support or propagation or both of Coldwater fish such as		Deleteu. :
but not limited to, longnose dace, Rio Grande chub, Rio Grande sucker, brown,		
cutthroat (including the native Rio Grande cutthroat), brook, or rainbow trout.		
cutinout(meruung uie nairte riis eranae eutanout), ereen, er rameen treut		
Color_Color as used herein means true color as well as apparent color. Color is expressed as		Deleted: :
"apparent" or "true" color. The apparent color includes color from dissolved materials plus that	-	
from suspended matter. By filtering or centrifuging out the suspended materials, the true color		
can be determined.		
Cumulative - Increasing by successive additions.		Deleted: :
Cumulative increasing by successive additions.	_/	Deleted: :
Designated uses - Those uses set forth in the water quality standards herein.		(20,0,00,0
,		
<b>Dissolved oxygen</b> (DO) - The amount of oxygen dissolved in water or the amount of oxygen		Deleted: ):
available for biochemical activity in water, commonly expressed as a concentration in milligrams		
per liter (mg/1).		
<b>Domestic water supply.</b> Water that only requires disinfection in order to be usable for drinking	_	Deleted: :
or cooking.		Deleteu.
of cooking.	1	Deleted: :
<b>Effluent</b> - Discharge into surface waters from other than natural sources.	1/1	Deleted: ¶
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	<b>Ephemeral stream</b> A reach of a stream that flows temporarily in direct response to precipitation or snowmelt, the channel bed of which is above the water table.		Deleted: :
	precipitation of showmen, the channel bed of which is above the water table.		
	<b>Epiliminion</b> The layer of water that overlies the thermocline of a lake and that is subject to the action of wind.		Deleted: :
ĺ	Escherichia coli (or E. coli) - A bacterial species that inhibits the intestinal tract of humans and		Deleted: ):
ı	other warm-blooded animals, the presence of which indicates the potential presence of		
	pathogenic microorganisms capable of producing disease.		
1			Belevel B ( 1 ) (
ı	<u>Eutrophication</u> - The maturation of a standing body of water, involving increasing concentration of dissolved nutrients and seasonal oxygen deficiency.		Deleted: Eutrophaication:
	concentration of dissorved nutrients and seasonal oxygen deficiency.		
	Existing uses. Those uses actually attained in a surface water body on or after November 28,		Deleted: :
	1975, whether or not they are referred to in the Pueblo Water Quality Standards.		
ı	EDA Alart Limits Levels promulated by the U.S. Food and Drug Administration concerning	_	Deleted: :
ı	<b>FDA Alert Limits</b> - Levels promulgated by the U.S. Food and Drug Administration concerning concentrations of substances in food.		Deleteu.;
	concentrations of substances in food.		
	Fecal coliform bacteria - The portion of the coliform group which is present in the gut or the		Deleted: :
	feces of warmblooded animals. Fecal coliform bacteria generally include organisms which are		
	capable of producing gas from lactose broth in a suitable culture medium within 24 hours at 44.5+/-0.2°C.		
	44.5+/-0.2 C.		
	<b>Fish culture_</b> Production of Coldwater or warmwater fish in a hatchery or rearing station.		Deleted: :
	<b>Fishery.</b> A balanced, diverse community of fishes controlled by the water quality, quantity, and		Deleted::
ı	habitat of a <u>water</u> body.		Deleted: water
I	Flow - Movement of surface water and/or groundwater within a water body, including but		Deleted: : Atmospheric
	<u>limited to atmospheric</u> precipitation resulting in surface and/or ground water runoff.		
1			(
	FTU. Formazin turbidity units (See American Public Health Association, Standard Methods for the Examination of Water and Wastewater).		Deleted: :
	Methods for the Examination of water and wastewater).		
	Geometric Mean_ a mean calculated by converting all values to logarithms; averaging the		Deleted: :
	logarithms; and determining the antilogarithm of that average.		
ı	Indianava Duadvard anavina or living naturally in a neuticular region or anvisamment		Deleted: :
ı	Indigenous - Produced, growing, or living naturally in a particular region or environment.		Deleteu. ;
1	Industrial - Refers to production of goods or services for profit.		Deleted: :
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ļ	<b>Industrial water supply use_</b> The use of water with reference to the production of goods or services for profit.		Deleted: :
	services for profit.		
	Intermittent stream - A stream or reach of a stream that flows only at certain times of the year,		Deleted: :
	when receiving flow from springs, melting snow, or localized precipitation.		( <b>-</b>
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	<b>LC-50.</b> The concentration of a substance that is lethal to 50% of the test organisms within a defined time period.	Deleted: :
ı	Marginal Coldwater fishery. A stream reach, lake, or impoundment where water temperature	Deleted: :
ı	and other characteristics are suitable for support of Coldwater fish such as, but not limited to	Deleted
	longnose dace, Rio Grande chub, Rio Grande sucker, brown, cutthroat (including the native Rio	
	Grande cutthroat), brook, or rainbow trout, but where temperature and other characteristics may	
	not always be suitable for propagation of Coldwater fish.	
ı		
I	Milligrams per Liter (mg/1) - The concentration at which one milligram is contained in a	Deleted: ):
	volume of one liter, one milligram per liter is equivalent to one part per million (ppm) at unit	
	density.	
	Mixing zone A three-dimensional zone in which discharged effluent mixes with the receiving	Deleted: :
	water and within which there is a gradation of water quality.	
	Narrative standards - A standard or criterion expressed in words rather than numerically.	Deleted: :
	Natural background - Characteristics that are not man-induced that are related to water quality;	Deleted: :
	the levels of pollutants present in ambient water that are from natural, as opposed to man-	
	induced, sources.	
	induced, sources.	
1	Nonpoint source A source of pollution that is not a discernible, confined, and discrete	Deleted: :
ı	conveyance (e.g., run-off from land).	Deleteu.
	conveyance (e.g., run-on nom rand).	
ı	NTII Nanhalamatria Turkiditu Unitara maasura of turkiditu in uutan (caa "turkiditu" halau)	Deleted
ı	NTU. Nephelometric Turbidity Units; a measure of turbidity in water (see "turbidity," below).	Deleted: :
ı	Nuisance condition A condition involving uncontrolled arounth of equation plants usually	Deleted
I	Nuisance condition - A condition involving uncontrolled growth of aquatic plants, usually	Deleted: :
	caused by excessive nutrients in the water.	
ı	Notation A. A. A. Marie I. A.	Belevet
ı	Nutrient - A chemical element or inorganic compound taken in by green plants and used in	Deleted: :
1	organic synthesis.	(
	<b>A</b>	Formatted: Font: Bold
ļ	Perennial stream - A stream or reach of a stream that flows continuously throughout the year,	Formatted: Tabs: 28.8 pt, Left + Not at 21.6 pt
	the upper surface of which is generally lower than the water table of the region adjoining the	
	stream.	Deleted: :
	<b>Persistent</b> Existing for a long or longer than unusual time or continuously.	Deleted: :
	<b>pH_</b> The negative logarithm of the effective hydrogen-ion concentration in gram equivalents per	Deleted: :
	liter.	
	Picocurie (pCi) - That quantity of radioactive material producing 2.22 nuclear transformations	Deleted: ):
	per minute.	
	Point source - Any discernible, confined, and discrete conveyance from which pollutants are or	Deleted: :
	may be discharged into a water body; does not include return flows from irrigated agriculture.	
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Primary contact use I he use of water for the practice of indian religion and indian traditional		Deleted: :
purposes by tribal members of the Pueblo; such use involves the intentional and incidental ingestion of the water and immersion in the water. Recreational use of the water involves.		Dolotodi in -
prolonged contact and the risk of ingesting water in quantities sufficient to pose a health hazard;	-<[[	Deleted: ing
an example is swimming. Primary contact also includes a recreational use of the water in which		Formatted: No underline, Font color: Auto
contact with the water need not occur and in which the probability of ingesting water is minimal; examples are fishing and boating.		Formatted: No underline, Font color: Auto
examples are fishing and boating.	``	Deleted: aAny
<b>Reservation</b> – All land within the exterior boundaries of the formal Picuris Pueblo Indian		
Reservation, including the original Picuris Pueblo Grant Lands, and, in addition, all tribal trust		
land located outside the boundaries of the formal Picuris Pueblo Indian Reservation.		
Segment - A surface water body which has common hydrologic characteristics or flow regulation regimes, possesses common natural physical, chemical, and biological characteristics, and exhibits common reactions to external stresses, such as the discharge of pollutants.		Deleted: :
Semanting Commenting action of discuss and that the total effect is an atom them the		Balana
Synergism - Cooperative action of discrete agents such that the total effect is greater than the		Deleted: :
sum of the effects taken independently.		
TDS - Total dissolved solids.		Deleted: :
1D3 - Total dissolved solids.		Deleted.
<b>Technology-based controls</b> - The application of technology-based effluent limitations as		Deleted: :
required under Section 301(b) of the Clean Water Act.		
Thermal Stratification temperature-caused horizontal layers of different densities produced in		Deleted: :
a lake.		
Threatened and Endangered Species Habitat - Means a stream reach, lake, spring, and/or pool		Deleted: :
where water quality, lack of interspecies competition, temperature and instream or benthic		
habitat provide for the support and propagation of a threatened or endangered aquatic species.		
Total Inorganic Nitrogen - The sum of nitrate nitrogen, nitrite nitrogen, and total ammonia		Deleted: :
nitrogen.		Deleted.
muogen.		
Toxic pollutant - Refers to those pollutants, or combinations of pollutants, including disease-		Deleted: :
causing agents, which after discharge and upon exposure, ingestion, inhalation, or assimilation		
into any organism, either directly from the environment or indirectly by ingestion through food		
chains, will, on the basis of information available to the Pueblo or the Environmental Protection		
Agency Administrator, cause death, disease, behavioral abnormalities, cancer, genetic mutations,		
physiological malfunctions (including malfunctions in reproduction), or physical deformations,		
in such organisms or their offspring.		
T 114 Oct 1 C1 1		
Toxicity State or degree of being toxic or poisonous.		Deleted: :
<b>Tribal waters</b> – All surface waters within the Reservation, as defined above, including surface		
waters situated wholly or partly within or bordering upon the Reservation.		
waters steaded whonly of partry within of bordering upon the reservation.		
<b>Turbidity</b> - Refers to water that is cloudy or muddy in physical appearance.		Deleted: :
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Use-attainability analysis A structured scientific assessment of the factors affecting attainment of a use for a body of water, which assessment may include physical, chemical biological, and economic factors, such as those referred to in 40 C.F.R. Section 131. 10(g).

Warmwater fishery. A stream reach, lake or impoundment where the water temperature and other characteristics are suitable for the support of warmwater fish such as but not limited to largemouth and smallmouth bass, crappie, white bass, bluegill, flathead catfish, channel catfish, or fathead minnow.

Water Contaminant. - Any, substance which alters the physical, chemical, or biological qualities of water.

Water quality-based controls. Effluent limitations, as provided under Section 301(b)(1)(C) of the Clean Water Act, which are developed and imposed on point-source dischargers in order to protect and maintain applicable water quality standards. These controls are more stringent than the technology-based effluent limitations required under other paragraphs of Section 301(b).

Zone of passage. The portion of the receiving water outside the mixing zone (where water quality is, throughout, the same as that of the receiving water).

			SECTION VII. PROCEDUKES FOR RULEMAKING	- <b>1</b> iiii;	+ Not at 28.8 pt
				100	Formatted: Font: Tms Rmn
1.		e - This ECTIO	Section establishes procedures for the revision of the Water Quality Code N I.4.D.		Formatted: Left, Right: 0 pt, Tabs: Not at 28.8 pt
<u>2.</u>	Publi (a)		e of Proposed Revision and Public Comment Period. c notice required.		Formatted: Level 3, Left, Indent: Left: 72 pt, Hanging: 36 pt, Right: 0 pt, Outline numbered + Level: 3 + Numbering Style: 1, 2, 3, + Start at: 1 + Alignment: Left + Aligned at: 0 pt + Tab after: 0 pt + Indent at: 0 pt, Tabs: 36 pt, Left + 72 pt, Left
		<u>(1)</u>	The Director of the Environment Department ("Director") shall give public	◆′	+ 108 pt, Left + Not at 28.8 pt
			notice of any proposed revision of the Water Quality Code.	/	Formatted: Font: Tms Rmn
<b>4</b>		(2)	Public notices may describe more than one proposed revision or set of	<u></u>	Formatted: Left, Right: 0 pt, Tabs: Not at 28.8 pt
		* * *	revisions (hereinafter "revision").	``	Formatted [18]
				<b>←</b> ><-	Formatted: Font: Tms Rmn
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		(1)	Public notice of a proposed revision shall allow at least thirty (30) days for		Formatted: Font: 12 pt
			<u>public comment.</u>		Formatted: Left
<b>V</b>				, `	Deleted: ¶
		(2)	Public notice of a public hearing shall be given at least twenty (20) days		Deleted: ¶ [21]
			before the hearing. Public notice of the hearing may be given at the same		Deleted: ¶ [22]
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- (c) <u>Methods.</u> The public notice required under subsection (a) shall be given by each of the following methods:
  - (1) A notice in a daily or weekly newspaper of general circulation in the areas of the Pueblo of Picuris that may be affected;
  - (2) Such other methods as may be appropriate, including press releases, web pages or any other forum or medium to elicit public participation.

#### (d) Contents.

- (1) All public notices issued under this part shall contain the following minimum information:
  - A. <u>Name and address of the office proposing the revision;</u>
  - B. A brief description of the proposed revision;
  - C. Name, address and telephone number of a person from whom interested persons may obtain further information, including copies of the proposed revision;
  - D. A brief description of the comment procedures and the time and place of any hearing that will be held (including a statement of procedures to request a hearing, unless a hearing has already been scheduled), and other procedures by which the public may participate in the decision to adopt the proposed revision;
  - E. The location of the administrative record, the times at which the record will be open for public inspection, and a statement that all comments submitted are available as part of the administrative record;
  - F. Any additional information that the Director considers necessary or appropriate.
- (2) Public notices for hearings. If the public notice for a hearing is issued separately from the public notice of the proposed revision, it shall contain the following information in addition to the contents of a general public notice described in subsection (d)(1):
  - A. Reference to the date of previous public notices relating to the proposed revision; and
  - B. A brief description of the nature and purpose of the hearing, including the applicable rules and procedures.

(3) Upon request, any person shall be provided a copy of the proposed revision.

#### 3. Public Comments and Requests for Public Hearings.

During the public comment period for a proposed revision, any person may submit written comments on the proposed revision.

#### 4. Public Hearings.

- (a) The Director shall hold a public hearing on a proposed revision to allow any person the opportunity to present orally their views, data or arguments.
- (b) The Director shall designate a Hearing Moderator for the public hearing. The
  Hearing Moderator shall be responsible for the orderly conduct of the public
  hearing. Nothing in this Section shall empower the Hearing Moderator to make
  any findings of fact, conclusions of law, or recommendations on the issuance of
  the proposed regulations. The Director, a member of the staff of the Environment
  Department, or any individual may serve as a Hearing Moderator, so long
  Hearing Moderator does not have a financial interest in the outcome of the
  proposed revision.
  - (c) Hearings shall be held at a time and place which facilitate attendance by interested persons and the general public. Public notice of a hearing shall be given as specified in subsection 2.
- (d) The Director, a member of the staff of the Environment Department, or the

  Hearing Moderator, shall inform the audience of the issues involved in the

  proposed rulemaking, the considerations the agency will take into account, the

  agency's tentative determinations (if any), and the information which is particularly solicited from the public.
  - (e) Any person may submit oral or written statements and information concerning the proposed revision. The Hearing Moderator may set reasonable limits upon the time allowed for oral statements. The Director shall allow the submission of statements in writing at the hearing, but the Director or Hearing Moderator shall not require a written statement in lieu of or as a condition for making an oral statement.
  - (f) The Hearing Moderator and Environment Department shall make reasonable efforts to accommodate requests for oral translations during the hearing.
  - (g) A tape recording or written transcript shall be made of the hearing. At the conclusion of the hearing, the Hearing Moderator shall forward to the Director the record of the hearing, including the tape recording or written transcript and any materials submitted at the hearing. The hearing record shall be made available to the public.

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(h) The public comment period under subsection 2 shall be extended by the Director if necessary to allow the record to remain open for 20 days after the close of any public hearing under this section to provide an opportunity for submission of rebuttal and supplementary information. The Director may further extend the comment period at his or her discretion to effectuate this purpose.

# 5. Obligation to Raise Issues and Provide Information During the Public Comment Period.

- (a) All persons, who believe that a proposed revision should be issued, modified, or withdrawn must raise all reasonably ascertainable issues and submit all reasonably available arguments and factual grounds supporting their position, including all supporting material, by the close of the public comment period.
- (b) All supporting materials shall be submitted in full and may not be incorporated by reference, unless they are already part of the administrative record in the same proceeding or consist of Pueblo of Picuris law, U.S. EPA's or the Director's documents of general applicability, or other generally available reference materials.
- (c) The Director may extend the public comment period on his or her own initiative or on request if the Director determines that such extension is necessary to obtain full public participation, and may grant additional time to comment to any person to the extent that a person desiring to comment demonstrates need for such time.

#### 6. Reopening of the Public Comment Period.

- (a) Whenever any data, information or arguments submitted during the public comment period appear to raise substantial new questions concerning the proposed revisions or the Environment Department becomes aware of significant new information, the Director may take one of the following actions:
  - (1) <u>Withdraw the proposed revision;</u>
  - (2) <u>Prepare a revised proposed revision and reopen the public comment period</u> under this section; or
  - (3) Reopen or extend the comment period to give interested persons an opportunity to comment on the information or arguments submitted.
- (b) If the Director reopens the public comment period pursuant to subsection (a)(2) or (3), the scope of the reopening shall be limited to the substantial new questions or significant new information that caused the reopening. All persons who believe any provision of the proposed revision is inappropriate must submit all reasonably available legal and factual grounds supporting their position, including all supporting material, by a date not less than forty-five (45) days after public notice under subsection (c) set by the Director. Thereafter, any person may file a written response to the material filed by any other person, by a date not less than twenty (20) days after the date set for filing of the material, set by the Director. Persons desiring to comment may request longer comment periods and a longer comment

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- period may be granted to the extent that the Director finds it necessary to effect the purpose of the reopening.
- (c) Public notice of any action taken by the Director pursuant to subsection (a) shall be issued under subsection 2. In addition to the requirements of subsection 2, the public notice for any action taken pursuant to subsection (a)(2) or (3) shall state the scope of the reopening.

#### 7. Issuance and Effective Date of Adoption of Revision.

- (a) The adoption of revision shall be based on the record of the public hearing prescribed in this section.
- (b) The Director shall give public notice of the adoption of revision as soon as possible pursuant to subsection 2(c) as well as to any persons who commented on the proposed revision and any others who request to receive such notice.
- (c) Every adopted revision shall be effective in accordance with its terms after approval by U.S. EPA in accordance with 33 U.S.C. 1313(c)(3).

#### 8. Response to Comments and Administrative Record.

- (a) Response to Comments. The adopted revision shall be accompanied by a response to comments. The response shall fully consider all comments resulting from the public comment period, including any hearing, conducted under this subpart. This response shall:
  - (1) Specify which provisions, if any, of the draft revisions have been changed in the adopted revision and the reasons for the change;
  - (2) Briefly describe and respond to all significant comments on the proposed revision raised during the public comment period or during any hearing; and
  - (3) Be available to the public.
- (b) <u>Administrative Record.</u> The Director shall base the adopted revision on the administrative record.
  - (1) The administrative record shall consist of:
    - A. <u>The proposed revision</u>;
    - B. The public notice;
    - C. <u>All comments received during the public comment period (including</u> any extension or reopening thereof);

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- D. The tape, transcript or notes of any hearing(s) held and any written materials submitted at such hearing(s);
- E. The response to comments and any new material that the Director references in the response to comments;
- F. Other documents contained in the supporting file for the revision; and
- G. The adopted revision.

The documents required under this paragraph should be added to the record as soon as possible after their receipt or publication by the Director. The record shall be complete on the date the revision is adopted.

- (2) Material readily available at the applicable program office or published material that is generally available and that is included in the administrative record under these provisions need not be physically included with the rest of the record as long as it is specifically referred to in the fact sheet or response to comments.
- (3) The administrative record shall be available for public inspection commencing no later than the date of the public notice.

#### 9. **Judicial Review.**

- (a) Exhaustion. Any person challenging the adoption of revision must follow the procedures set forth in this Subpart as a prerequisite to the seeking of judicial review of the final agency action in Pueblo of Picuris Tribal Court.
- (b) Final agency action. For purposes of judicial review, final agency action occurs when notice is first given of the adoption of revision.
- (c) Filing the record. Within 30 (thirty) days following the date that a petition for judicial review is filed with the Pueblo of Picuris Tribal Court, the Director shall file in the court a certified copy or certified index of the record on which the rulemaking was based.

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## Appendix I Ammonia Tables.

pH-dependent va	pH-dependent values for the Acute Criterion (CMC), mg N/L							
pН	Salmonids Present	Salmonids Absent						
6.5	32.6	48.8						
6.6	31.3	46.8						
6.7	29.8	44.6						
6.8	28.1	42.0						
6.9	26.2	39.1						
7.0	24.1	36.1						
7.1	22.0	32.8						
7.2	19.7	29.5						
7.3	17.5	26.2						
7.4	15.4	23.0						
7.5	13.3	19.9						
7.6	11.4	17.0						
7.7	9.65	14.4						
7.8	8.11	12.1						
7.9	6.77	10.1						
8.0	5.62	8.40						
8.1	4.64	6.95						
8.2	3.83	5.72						
8.3	3.15	4.71						
8.4	2.59	3.88						
8.5	2.14	3.20						
8.6	1.77	2.65						
8.7	1.47	2.20						
8.8	1.23	1.84						
8.9	1.04	1.56						
9.0	0.885	1.32						

	Temperature and pH-dependent values of the Chronic Criterion for Fish Early Life Stages Present																	
	Temperature (degrees Celsius)																	
рН													30					
6.5	6.67	6.67	6.46	6.06	5.68	5.33	4.99	4.68	4.39	4.12	3.86	3.62	3.39	3.18	2.98	2.80	2.62	2.46
6.6	6.57	6.57	6.36	5.97	5.59	5.25	4.92	4.61	4.32	4.05	3.80	3.56	3.34	3.13	2.94	2.75	2.58	2.42
6.7	6.44	6.44	6.25	5.86	5.49	5.15	4.83	4.52	4.24	3.98	3.73	3.50	3.28	3.07	2.88	2.70	2.53	2.37
6.8	6.29	6.29	6.10	5.72	5.36	5.03	4.72	4.42	4.14	3.89	3.64	3.42	3.20	3.00	2.82	2.64	2.47	2.32
6.9	6.12	6.12	5.93	5.56	5.21	4.89	4.58	4.30	4.03	3.78	3.54	3.32	3.11	2.92	2.74	2.57	2.41	2.25
7.0	5.91	5.91	5.73	5.37	5.04	4.72	4.43	4.15	3.89	3.65	3.42	3.21	3.01	2.82	2.64	2.48	2.32	2.18
7.1	5.67	5.67	5.49	5.15	4.83	4.53	4.25	3.98	3.73	3.50	3.28	3.08	2.88	2.70	2.53	2.38	2.23	2.09
7.2	5.39	5.39	5.22	4.90	4.59	4.31	4.04	3.78	3.55	3.33	3.12	2.92	2.74	2.57	2.41	2.26	2.12	1.99
7.3	5.08	5.08	4.92	4.61	4.33	4.06	3.80	3.57	3.34	3.13	2.94	2.76	2.58	2.42	2.27	2.13	2.00	1.87
7.4	4.73	4.73	4.59	4.30	4.03	3.78	3.55	3.32	3.12	2.92	2.74	2.57	2.41	2.26	2.12	1.98	1.86	1.74
7.5	4.36	4.36	4.23	3.97	3.72	3.49	3.27	3.06	2.87	2.69	2.53	2.37	2.22	2.08	1.95	1.83	1.72	1.61
7.6	3.98	3.98	3.85	3.61	3.39	3.18	2.98	2.79	2.62	2.45	2.30	2.16	2.02	1.90	1.78	1.67	1.56	1.47
7.7	3.58	3.58	3.47	3.25	3.05	2.86	2.68	2.51	2.36	2.21	2.07	1.94	1.82	1.71	1.60	1.50	1.41	1.32
7.8	3.18	3.18	3.09	2.89	2.71	2.54	2.38	2.23	2.10	1.96	1.84	1.73	1.62	1.52	1.42	1.33	1.25	1.17
7.9	2.80	2.80	2.71	2.54	2.38	2.24	2.10	1.96	1.84	1.73	1.62	1.52	1.42	1.33	1.25	1.17	1.10	1.03
8.0	2.43	2.43	2.36	2.21	2.07	1.94	1.82	1.71	1.60	1.50	1.41	1.32	1.24	1.16	1.09	1.02	0.96	0.897
8.1	2.10	2.10	2.03	1.91	1.79	1.68	1.57	1.47	1.38	1.29	1.21	1.14	1.07	1.00	0.94	0.879	0.824	0.773
8.2	1.79	1.79	1.74	1.63	1.53	1.43	1.34	1.26	1.18	1.11	1.04	0.973	0.912	0.855	0.802	0.752	0.705	0.661
8.3	1.52	1.52	1.48	1.39	1.30	1.22	1.14	1.07	1.00	0.941	0.882	0.827	0.775	0.727	0.682	0.639	0.599	0.562
8.4	1.29	1.29	1.25	1.17	1.10	1.03	0.97	0.906	0.849	0.796	0.747	0.700	0.656	0.615	0.577	0.541	0.507	0.475
8.5	1.09	1.09	1.06	0.990	0.928	0.870	0.816	0.765	0.717	0.672	0.630	0.591	0.554	0.520	0.487	0.457	0.428	0.401
8.6	0.920	0.920	0.892	0.836	0.784	0.735	0.689	0.646	0.606	0.568	0.532	0.499	0.468	0.439	0.411	0.386	0.362	0.339
8.7	0.778	0.778	0.754	0.707	0.663	0.622	0.583	0.547	0.512	0.480	0.450	0.422	0.396	0.371	0.348	0.326	0.306	0.287
8.8	0.661	0.661	0.641	0.601	0.563	0.528	0.495	0.464	0.435	0.408	0.383	0.359	0.336	0.315	0.296	0.277	0.260	0.244
8.9	0.565	0.565	0.548	0.513	0.481	0.451	0.423	0.397	0.372	0.349	0.327	0.306	0.287	0.269	0.253	0.237	0.222	0.208
9.0	0.486	0.486	0.471	0.442	0.414	0.389	0.364	0.342	0.320	0.300	0.281	0.264	0.247	0.232	0.217	0.204	0.191	0.179

	Temperature and pH-dependent values of the Chronic Criterion (CCC) for Fish Early Life Stages Absent, mg N/L										
Hq				Tem	perature (d	egrees Cel	sius)				
рп	0-7	8	9	10	11	12	13	14	15*	16*	
6.5	10.8	10.1	9.51	8.92	8.36	7.84	7.35	6.89	6.46	6.06	
6.6	10.7	9.99	9.37	8.79	8.24	7.72	7.24	6.79	6.36	5.97	
6.7	10.5	9.81	9.20	8.62	8.08	7.58	7.11	6.66	6.25	5.86	
6.8	10.2	9.58	8.98	8.42	7.90	7.40	6.94	6.51	6.10	5.72	
6.9	9.93	9.31	8.73	8.19	7.68	7.20	6.75	6.33	5.93	5.56	
7.0	9.60	9.00	8.43	7.91	7.41	6.95	6.52	6.11	5.73	5.37	
7.1	9.20	8.63	8.09	7.58	7.11	6.67	6.25	5.86	5.49	5.15	
7.2	8.75	8.20	7.69	7.21	6.76	6.34	5.94	5.57	5.22	4.90	
7.3	8.24	7.73	7.25	6.79	6.37	5.97	5.60	5.25	4.92	4.61	
7.4	7.69	7.21	6.76	6.33	5.94	5.57	5.22	4.89	4.59	4.30	
7.5	7.09	6.64	6.23	5.84	5.48	5.13	4.81	4.51	4.23	6.97	
7.6	6.46	6.05	5.67	5.32	4.99	4.68	4.38	4.11	3.85	3.61	
7.7	5.81	5.45	5.11	4.79	4.49	4.21	3.95	3.70	3.47	3.25	
7.8	5.17	4.84	4.54	4.26	3.99	3.74	3.51	3.29	3.09	2.89	
7.9	4.54	4.26	3.99	3.74	3.51	3.29	3.09	2.89	2.71	2.54	
8.0	3.95	3.70	3.47	3.26	3.05	2.86	2.68	2.52	2.36	2.21	
8.1	3.41	3.19	2.99	2.81	2.63	2.47	2.31	2.17	2.03	1.91	
8.2	2.91	2.73	2.56	2.40	2.25	2.11	1.98	1.85	1.74	1.63	
8.3	2.47	2.32	2.18	2.04	1.91	1.79	1.68	1.58	1.48	1.39	
8.4	2.09	1.96	1.84	1.73	1.62	1.52	1.42	1.33	1.25	1.17	
8.5	1.77	1.66	1.55	1.46	1.37	1.28	1.20	1.13	1.06	0.990	
8.6	1.49	1.40	1.31	1.23	1.15	1.08	1.01	0.951	0.892	0.836	
8.7	1.26	1.18	1.11	1.04	0.976	0.915	0.858	0.805	0.754	0.707	
8.8	1.07	1.01	0.944	0.885	0.829	0.778	0.729	0.684	0.641	0.601	
8.9	0.917	0.860	0.806	0.756	0.709	0.664	0.623	0.584	0.548	0.513	
9.0	0.790	0.740	0.694	0.651	0.610	0.572	0.536	0.503	0.471	0.442	

<sup>\*</sup> At 15 C and above, the criterion for fish ELS absent is the same as the criterion for fish ELS present.

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